SIEMENS

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BT300 Variable Frequency Drives

Redesigned, re-tooled, and ready to meet rigorous demands

Answers for Infrastructure.

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EXIT
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Save 20-50% on energy costs and gain reliable control of HVAC equipment with new BT300 VFDs

While constantly expected to do more with less, managing energy consumption and optimizing occupant comfort remains of utmost importance to facility managers. They also require products that will integrate seamlessly into existing equipment and building management systems. The highly efficient BT300 delivers all this and more.

Siemens engineers have retooled and field tested our VFD portfolio to ensure it delivers optimum results!

Available in frame sizes up to 250 hp, the BT300 is well-suited for demanding HVAC environments. Using the BT300 helps save 20-50% of energy compared to equipment with little or no control. Built-in features – like a real-time clock, energy savings optimization programming, and a sleep function – help measure energy savings. An easy-to-use, read and understand interface uses built-in wizards that get HVAC equipment up and running quickly and accurately. Anyone can safely and quickly commission the BT300 using default parameters that are optimized for typical HVAC applications.

In addition to the HVAC functions, BT300 drives provide a special control function in the event of fire. The ensures escape routes are kept free of smoke.

Simplify the maintenance of motors, pumps and fans

The maintenance of motors, pumps and fans is simplified with VFD components that are designed to last. The drive's diagnostic alert function informs staff if a belt is broken or a pump is empty or jammed, reducing the time it takes to diagnose and fix a problem. An always available and easy to understand built-in manual highlights possible causes and remedies to situations.

Integrates with today's open protocols, including APOGEE and BACnet

Easy network integration means the BT300 VFDs are ready to communicate with Building Management System, embedded RS485 and Ethernet HVAC protocols:

- P1 protocol for APOGEE
- BACnet MS/TP
- Modbus RTU
- Johnson Control – Metasys N2
- BACnet IP, Modbus TCP, Optional LON Interface

World-class technical support available for the life of the product

Siemens is trusted for innovative solutions, advanced technology, and superior quality. We also strive for excellence in customer service. No matter how easy the BT300 is to install and commission, it is reassuring to know help is available locally. Count on our technical expertise and services for the life of the product, from integration to ongoing service and support.

Highlights

- Energy savings of up to 50% when operating fans and pumps
- Drives up to 250 hp
- User friendly control panel with intuitive interface
- Reliable control for a wide range of HVAC applications, including special control option in the event of fire
- Complete system integration with Siemens expertise
- Ethernet capabilities include BACnet IP and Modbus TCP
- Environment safe – RoHS Compliant

BT300 Features

Sophisticated features, and an easy to use menu structure speed up installation and commissioning and drive down energy costs. Our new drives offer the features you want, in a durable housing:

Advanced Keypad with Start-Up Wizards and Multi-Line Graphics and Displays 1

Built in simplicity with an easy to use, read and understand interface. Push button speed control and 10–step commissioning make programming easy.

- Multilingual and multiline clear text display
- Nine user-defined values can be monitored and displayed at one time
- Graphical keypad features help texts and clear fault info including possible causes and remedies

Real Time Clock & Sleep Mode Function 2

Built in features like the real time clock, energy savings optimization programming, and sleep function allows you to measure energy savings.

- Real time clock can be programmed to control the HVAC in different ways when the office is busy and when it is closed
- Sleep mode starts and stops the drive automatically on demand. If demand is low, more energy can be saved. If demand increases, the drive automatically switches on

Onboard kWh Meter 3

The BT300 monitors the kWh consumption and allows you to calculate the actual energy savings.

- Integrated kWh meter is displayed via the keypad
- Reset the meter to start metering predefined by the user

Energy Efficient 4

State of the art power electronics and innovative transistor technologies ensure maximum energy efficiency.

- Low heat loss
- Low operating temperature

Power Capacitors - Rapid Startup 5

The BT300's thin film capacitors save time during drive startup and service replacement.

- No capacitor conditioning required
- Unlimited shelf life
- Out of the box installation

Smaller Footprint 6

Both UL Type 1 and Type 12 have the same footprint, a smaller housing that fits nicely into tight spaces.

- Easier installations
- Smallest Type 12 footprint

Fire Mode 7

In case of an emergency or fire, the BT300 overrides the self-protection and motor protection diagnostics and keeps smoke exhaust fans functioning.

- Save on costs of additional equipment in stairways and escape routes

Multipump/Fan Application 8

With the BT300 you can control several pumps or fans connected direct-on-the-line in addition to the unit that is speed controlled.

- Eliminates the need for additional controllers

Two PID Controllers

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Achieve fast and accurate pressure control.

- Actuators can be controlled through the drive I/O

Built-in Integration Features

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All the necessary standard and optional hardware to integrate the drive into the automation and electrical networks are built in.

- Chokes to minimize current harmonics
- Circuit boards designed to withstand active mechanical and chemical substances including hydrogen sulfide and sulfur dioxide.
- RFI filter to minimize radio frequency disturbances
- Serial bus and Ethernet all built in and powered in – no need for extra equipment
- Optional I/O expansion cards

Our new hard-performing drives were designed with some of the best features of the old drives:

- IP54 (NEMA Type 12)
- Extremely unique low harmonics design reduces noise and interference
- Built-in building automation system protocols for easy network integration
- SED2 EasyComm Software Tool
- Belt failure detection with or without an external sensor
- One common interface throughout all power ranges

Variable speed drives perform in all

Product Ordering

Your Product Number																
Example Product Number	B	T	3	0	0	-	0	0	1	X	2	-	0	1	X	
Example Product Number	B	T	3	0	0	-	0	0	1	5	4	-	1	2	D	L

Model
- **BT300** VFD only

HP
- **1, 1.5, 2, 3, 5, 7.5, 10, 15**
- **20, 25, 30, 40, 50, 60, 75**
- **100, 125, 150, 200, 250**
- **X** No Fract HP,
- **5** 1/2 HP

Voltage
- **2** 200 to 240
- **4** 380 to 480

NEMA
- **01** UL Type 1
- **12** UL Type 12

Type
- **X** Drive Only
- **D** Disconnect Box – ONLY WITH TYPE 12

Options
- **L** LON Card Installed

Frame Sizes

UL Type 1 and UL Type 12 Frame Sizes and Power Range

Voltage	KW	0.75	1.1	1.5	2.2	4	5.5	7.5	11	15
	HP	1	1.5	2	3	5	7.5	10	15	20
208V	Frame Size	4				5			6	
480V		N/A	4					5		

Voltage	KW	18.5	22	30	37	45	55	75	90	110	132	160
	HP	25	30	40	50	60	75	100	125	150	200	250
208V	Frame Size	7			8			9		NA		
480V		6			7			8			9	

Migration kits based on frame size sold separately.

types of applications

Output Ratings

Voltage (±10%)	Product Number			Output Rating		Rated Continuous Current	Frame Size
	UL Type 1	UL Type 12	UL Type 12 with Drive Disconnect	HP	kW		
208V and 230V to 240V (3-Phase)	BT300-001X2-01X	BT300-001X2-12X	BT300-001X2-12D	1.0	0.75	4.8	FS4
	BT300-00152-01X	BT300-00152-12X	BT300-00152-12D	1.5	1.1	6.7	FS4
	BT300-002X2-01X	BT300-002X2-12X	BT300-002X2-12D	2.0	1.5	8.0	FS4
	BT300-003X2-01X	BT300-003X2-12X	BT300-003X2-12D	3.0	2.2	11.0	FS4
	BT300-005X2-01X	BT300-005X2-12X	BT300-005X2-12D	5.0	4.0	18.0	FS5
	BT300-00752-01X	BT300-00752-12X	BT300-00752-12D	7.5	5.5	24.0	FS5
	BT300-010X2-01X	BT300-010X2-12X	BT300-010X2-12D	10.0	7.5	31.0	FS5
	BT300-015X2-01X	BT300-015X2-12X	BT300-015X2-12D	15.0	11.0	48.0	FS6
	BT300-020X2-01X	BT300-020X2-12X	BT300-020X2-12D	20.0	15.0	62.0	FS6
	BT300-025X2-01X	BT300-025X2-12X	BT300-025X2-12D	25.0	18.5	75.0	FS7
	BT300-030X2-01X	BT300-030X2-12X	BT300-030X2-12D	30.0	22.0	88.0	FS7
	BT300-040X2-01X	BT300-040X2-12X	BT300-040X2-12D	40.0	30.0	105.0	FS7
	BT300-050X2-01X	BT300-050X2-12X	—	50.0	37.0	140.0	FS8
	BT300-060X2-01X	BT300-060X2-12X	—	60.0	45.0	170.0	FS8
	BT300-075X2-01X	BT300-075X2-12X	—	75.0	55.0	205.0	FS8
	BT300-100X2-01X	BT300-100X2-12X	—	100.0	75.0	261.0	FS9
	BT300-125X2-01X	BT300-125X2-12X	—	125.0	90.0	310.0	FS9
380V to 480V (3-Phase)	BT300-00154-01X	BT300-00154-12X	BT300-00152-12D	1.5	1.1	3.7	FS4
	BT300-002X4-01X	BT300-002X4-12X	BT300-002X4-12D	2.0	1.5	5.3	FS4
	BT300-003X4-01X	BT300-003X4-12X	BT300-003X4-12D	3.0	2.2	6.2	FS4
	BT300-005X4-01X	BT300-005X4-12X	BT300-005X4-12D	5.0	4.0	10.6	FS4
	BT300-00754-01X	BT300-00754-12X	BT300-00752-12D	7.5	5.5	13.2	FS4
	BT300-010X4-01X	BT300-010X4-12X	BT300-010X4-12D	10.0	7.5	16.0	FS5
	BT300-015X4-01X	BT300-015X4-12X	BT300-015X4-12D	15.0	11.0	23.0	FS5
	BT300-020X4-01X	BT300-020X4-12X	BT300-020X4-12D	20.0	15.0	31.0	FS5
	BT300-025X4-01X	BT300-025X4-12X	BT300-025X4-12D	25.0	18.5	38.0	FS6
	BT300-030X4-01X	BT300-030X4-12X	BT300-030X4-12D	30.0	22.0	46.0	FS6
	BT300-040X4-01X	BT300-040X4-12X	BT300-040X4-12D	40.0	30.0	61.0	FS6
	BT300-050X4-01X	BT300-050X4-12X	BT300-050X4-12D	50.0	37.0	72.0	FS7
	BT300-060X4-01X	BT300-060X4-12X	BT300-060X4-12D	60.0	45.0	87.0	FS7
	BT300-075X4-01X	BT300-075X4-12X	BT300-075X4-12D	75.0	55.0	105.0	FS7
	BT300-100X4-01X	BT300-100X4-12X	—	100.0	75.0	140.0	FS8
	BT300-125X4-01X	BT300-125X4-12X	—	125.0	90.0	170.0	FS8
	BT300-150X4-01X	BT300-150X4-12X	—	150.0	110.0	205.0	FS8
	BT300-200X4-01X	BT300-200X4-12X	—	200.0	132.0	261.0	FS9
	BT300-250X4-01X	BT300-250X4-12X	—	250.0	160.0	310.0	FS9

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Answers for infrastructure.

Our world is undergoing changes that force us to think in new ways: demographic change, urbanization, global warming, and resource shortages. Maximum efficiency has top priority – and not only where energy is concerned. In addition, we need to increase comfort for the well-being of users. Also, our need for safety and security is constantly growing. For our customers, success is defined by how well they manage these challenges. Siemens has the answers.

"We are the preferred partner for energy-efficient, safe, and secure buildings and infrastructure."

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